

(12) **UK Patent Application** (19) **GB** (11) **2 168 499 A**

(43) Application published 18 Jun 1986

(21) Application No **8431162**

(22) Date of filing **11 Dec 1984**

(71) Applicant
Norman William Chappell,
95 Hainault Road, Chigwell, Essex

(72) Inventor
Norman William Chappell

(74) Agent and/or Address for Service
F J Cleveland & Company,
40-43 Chancery Lane, London WC2A 1JQ

(51) INT CL^a
G02C 5/22

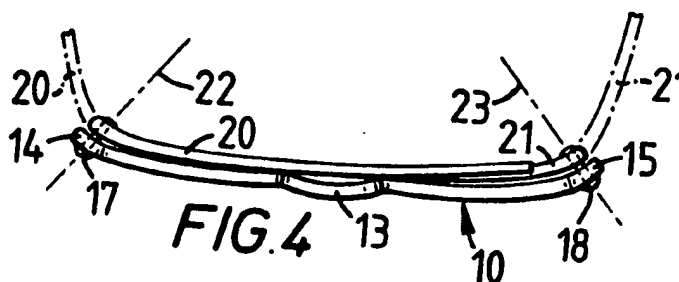
(52) Domestic classification (Edition H):
G2J S2A4A S2A4H

(56) Documents cited
GB 0676530 **GB 0566321** **GB 0458990**
GB 0623682 **GB 0558267**

(58) Field of search
G2J
Selected US specifications from IPC sub-class G02C

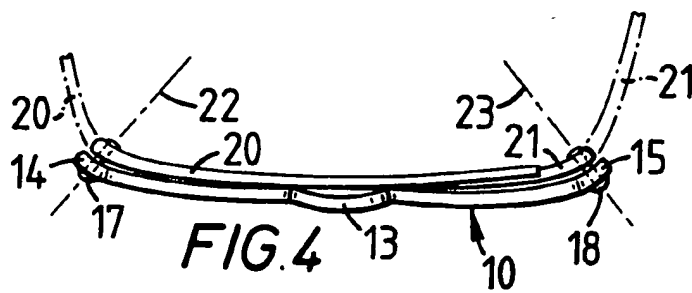
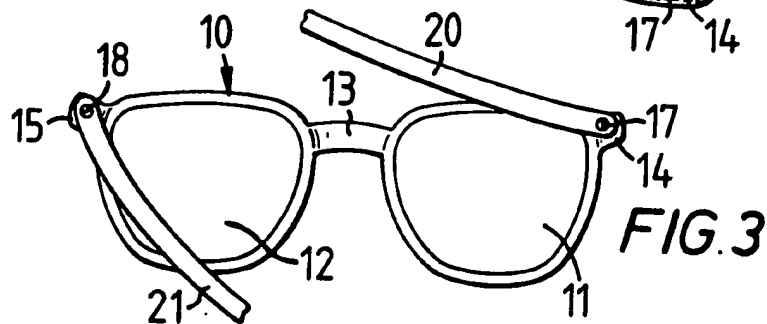
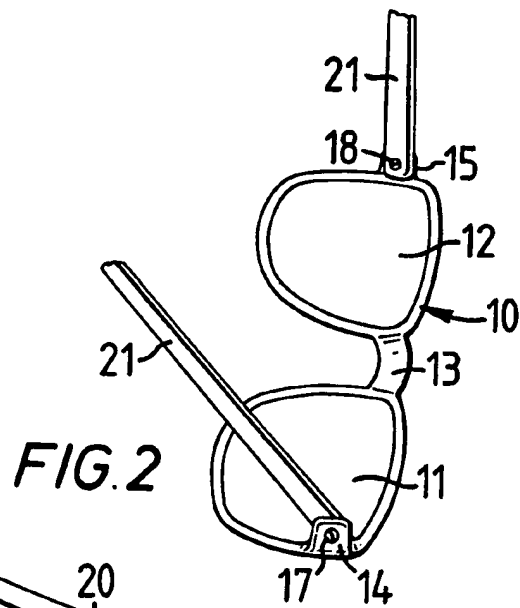
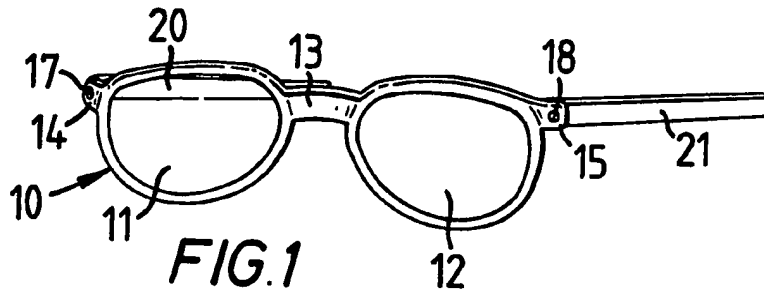
(54) **Spectacle frame**

(57) A spectacle frame comprises a front member (10) for carrying lenses and two side members (20,21) for engaging a wearer's ears hinged to the front member for movement between folded positions generally parallel to the front member and extended positions extending away from the front member. Each hinge axis (22,23) lies in a plane generally bisecting the angle between the front member and the respective side member in its extended position, but without the hinge axes lying parallel to the general plane of the front member, such that the side members in their extended positions are engageable with the wearer's ears but in their folded positions lie snugly in contact with the front member.



GB 2 168 499 A

The drawing(s) originally filed was/were informal and the print here reproduced is taken from a later filed formal copy.



SPECIFICATION

Spectacle frame

5 This invention relates to spectacle frames.

Heretofore, spectacle frames have been conventionally composed of a front member for holding the spectacle lenses and two side or temple members hinged to the front member, the hinge joints being provided by cheniers or trunnions mounted on the members and slotted into each other in a fork-like manner, being held in position by means of a screw which is normally vertical in use. This type of joint while universally used causes a bulkiness of the frame when closed and this is accentuated because the side members are invariably bowed to fit the wearers temples and when closed are counter curved with respect to the front.

The invention provides a spectacle frame comprising

a front member for carrying a lens or lenses, and

25 two side members for engaging a wearer's ears and hingedly connected to the front member for movement between folded positions generally parallel to the front member and extended positions extending away from the front member,

characterised in that each hinge axis lies in a plane intersecting the angle between the front member and the respective side member in its extended position, but without the hinge axes lying parallel to the general plane of the front member, such that the side members in their extended positions are engageable with the wearer's ears for wear.

With normal geometry of construction of spectacle frames, the said plane would generally bisect the said angle.

Preferably, each hinge axis lies on a line generally bisecting the said angle. Typically, the side members extend generally perpendicular to the front member in their extended positions so that each hinge axis is orientated generally at 45° to the front member.

The side members may advantageously be shaped so as to lie snugly against the front member in their folded positions.

Preferably, means are provided for retaining each side member in its extended position. Such means may comprise at least one detent formed on one of the front member and the side member, and a or a respective protrusion formed on the other of the front member and the side member and engageable in the detent.

Optionally, the hinge connection may comprise spring means arranged so as to bias the side members towards the head of the wearer in use.

An embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

FIGURE 1 is a front perspective view of a spectacle frame manufactured in accordance with the present invention, with the side or temple members extended ready for use;

70 FIGURE 2 is a side perspective elevation of the frame shown in Figure 1 with one of the side members partially extended;

FIGURE 3 is a rear elevation of the frame with both side members partially extended; and

75 FIGURE 4 illustrates the frame with the temple members in closed or folded positions and illustrates the compactness with the temple members actually reinforcing the strength of the front and the lenses therein.

The frame comprises a front member 10 having the usual apertures 11, 12 for carrying spectacle lenses and a central bridge 13.

The lateral extremities of the front member 10 are extended to provide joint lugs 14, 15 and are curved in a rearward direction. The lugs 14, 15 are drilled to receive pivot screws 17, 18 respectively by means of which two side or temple members 20, 21 respectively are hinged to the front member 10, the screws being received in corresponding holes drilled in the side members. The side members are bowed to the same gentle curve as the front member 10 so that when folded, generally parallel to the front member (as shown in Figure 4) they lie flat and snugly in close contact with the front member 10. When opened out however, to their extended positions (shown in ghost lines in Figure 4) generally perpendicular to the front member 10, this curved shape also conforms anatomically with the wearer's temples.

The side members when folded reinforce the strength of the front member and lenses by virtue of the snug fitting. This is advantageous for example when the wearer slips them into a pocket.

As can be best appreciated from Figure 4, the hinge axes (that is, the axes of the screws 17, 18), indicated 22, 23 respectively, lie on lines which bisect the angle between the general plane of the front member 10 and the side members extended. Because this angle is roughly a right angle, as is usual, the axes are generally at 45° to the front member. This arrangement has the advantage of the compact folded condition referred to above. However, the hinge axes can lie anywhere on a plane bisecting the said angle without of course lying parallel to the front member, i.e. normally vertical in use.

As will be understood from consideration of the drawings, in particular Figure 2, the side members in swivelling about the hinge axes from their folded positions swing out, either downwardly or upwardly and initially in the plane of the front member, and around into their extended positions.

A compression spring may be fitted around each of the pivot screws so that when the

side members are extended they exercise a spring bias against the wearer's temples thus giving a firmer and more comfortable fit.

- In order to retain the side members in their
- 5 extended positions, at least one detent may be formed, for each joint, in either the front member or the side member adjacent the joint, a corresponding protrusion being formed in the other of those members to be engage-
- 10 able in the detent when the side member is in its extended position.

- The swivel-type pivot joints have a further advantage in enabling the angle of the front member to be adjusted in wear so that the
- 15 line of vision passes normally through the centres of the lenses for any particular function (e.g. viewing above eye-level, playing snooker etc.)

20 CLAIMS

1. A spectacle frame comprising a front member for carrying a lens or lenses, and two side members for engaging a wearer's
- 25 ears and hingedly connected to the front member for movement between folded positions generally parallel to the front member and extended positions extending away from the front member,
- 30 characterised in that each hinge axis lies in a plane generally bisecting the angle between the front member and the respective side member in its extended position, but without the hinge axes lying parallel to the general
- 35 plane of the front member, such that the side members in their extended positions are engageable with the wearer's ears for wear.
2. A frame as claimed in claim 1 wherein each hinge axis lies on a line generally bisect-
- 40 ing the said angle.
3. A frame as claimed in either claim 1 or claim 2 wherein the side members extended generally perpendicular to the front member in their extended positions so that each hinge
- 45 axis is orientated generally at 45° to the front member.
4. A frame as claimed in any preceding claim wherein the side members are shaped so as to lie snugly against the front member
- 50 in their folded positions.
5. A frame as claimed in any preceding claim comprising means for retaining each side member in its extended position.
6. A frame as claimed in claim 5 wherein
- 55 the retaining means comprises at least one detent formed on one of the front member and the side member, and a or a respective protrusion formed on the other of the front member and the side member and engageable
- 60 in the detent.
7. A frame as claimed in any preceding claim wherein the hinge connections comprise spring means arranged so as to bias the side members towards the head of the wearer in
- 65 use.

8. A spectacle frame substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

Printed in the United Kingdom for
Her Majesty's Stationery Office, Dd 8818935, 1986, 4235.
Published at The Patent Office, 25 Southampton Buildings,
London, WC2A 1AY, from which copies may be obtained.